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Substitute for form 1449A/PTO		<b>Complete If Known</b>			
		Application Number	10/616,659		
<b>SUPPLEMENTAL INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b>  (Use as many sheets as necessary)		Filing Date	July 9, 2003		
		First Named Inventor	MARANAS, et al.		
		Art Unit	1645		
		Examiner Name			
Sheet	1	of	1	Attorney Docket Number	P06367US03

U.S. PATENT DOCUMENTS					
Examiner Initials *	Cite No. <sup>1</sup>	Document Number Number - Kind Code <sup>2</sup> (if known)	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
KRS	1	US- 2002/0012939 A1	01/31/2002	Palsson	
KRS	2	US- 2002/0142321 A1	10/03/2002	Palsson et al.	
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FOREIGN PATENT DOCUMENTS						
Examiner Initials *	Cite No. <sup>1</sup>	<u>Foreign Patent Document</u> Country Code <sup>3</sup> - Number <sup>4</sup> - Kind Code <sup>5</sup> (if known)	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear	T *
KRS	3	WO 02/055995 A2	07/18/2002	Penn State Research, Maranas		
	4	PCT/US03/21598	07/09/2003	International Search Report		
				Penn State		

Not  
considered

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<sup>1</sup> Applicant's unique citation designation number (optional). <sup>2</sup> See Kinds of USPTO Patent Documents at [www.uspto.gov](http://www.uspto.gov) or MPEP 901.04. <sup>3</sup> Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). <sup>4</sup> For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. <sup>5</sup> Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST. 16 if possible.

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<b>SECOND SUPPLEMENTAL INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b>  (Use as many sheets as necessary)		Filing Date	July 9, 2003
		First Named Inventor	MARANAS, Costas D.
		Art Unit	1645
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		First Named Inventor	MARANAS, Costas D., et al.
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KRS	1	US- 2002/0168654 A1	11/14/2002	Maranas et al.	
KRS	2	US- 2003/0073092 A1	04/17/2003	Maranas et al.	
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		First Named Inventor	MARANAS, Costas D., et al.
		Group Art Unit	
		Examiner Name	
		Attorney Docket Number	P06367US03
Sheet	2	of	3

OTHER PRIOR ART – NON PATENT LITERATURE DOCUMENTS			
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KRS	3	Biebl, H, Menzel, K, Zeng, AP, Deckwer, WD. 1999. "Microbial production of 1,3-propanediol". Appl Environ Microbiol 52: 289-297.	
	4	Burgard, AP, Maranas, CD. 2001. "Probing the performance limits of the Escherichia coli metabolic network subject to gene additions or deletions". Biotechnol Bioeng 74: 364-375.	
	5	Burgard, AP, Maranas, CD. 2003. Optimization-based framework for inferring and testing hypothesized metabolic objective functions. Biotechnol Bioeng 82(6): 670-7.	
	6	Burgard, AP, Vaidyaraman, S, Maranas, CD. 2001. "Minimal Reaction Sets for Escherichia coli Metabolism under Different Growth Requirements and Uptake Environments." Biotechnol Prog 17: 791-797.	
	7	Cameron, DC, Altaras, NE, Hoffman, ML, Shaw, AJ. 1998. "Metabolic engineering of propanediol pathways." Biotechnol Prog 14(1): 116-25.	
	8	Compagno, C, Boschi, F, Ranzi, BM. 1996. "Glycerol production in a triose phosphate isomerase deficient mutant of Saccharomyces cerevisiae". Biotechnol Prog 12(5): 591-5.	
	9	Edwards, JS, Ibarra, RU, Palsson, Bo. 2001. "In silico predictions of Escherichia coli metabolic capabilities are consistent with experimental data". Nat Biotechnol 19(2): 125-30.	
	10	Edwards, JS, Palsson, BO. 2000. "The Escherichia coli MG1655 in silico metabolic genotype: its definition, characteristics, and capabilities". Proc Natl Acad Sci U S A 97(10): 5528-33.	
	11	Gupta, S, Clark, DP. 1989. "Escherichia coli derivatives lacking both alcohol dehydrogenase and phosphotransacetylase grow anaerobically by lactate fermentation." J Bacteriol 171(7): 3650-5.	

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		First Named Inventor	MARANAS, Costas D.
		Group Art Unit	
		Examiner Name	
Sheet 3 of 3	Attorney Docket Number	P06367US03	

OTHER PRIOR ART – NON PATENT LITERATURE DOCUMENTS			
Examiner Initials *	Cita No. <sup>1</sup>	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T <sup>2</sup>
KRS	12	Hartlep, M, Hussmann, W, Prayitno, N, Meynial-Salles, I, Zeng, AP. 2002. "Study of two-stage processes for the microbial production of 1,3-propanediol from glucose". Appl Microbiol Biotechnol 60(1-2): 60-6.	
	13	<del>Hugler, M, Menendez, C, Schagger, H, Fuchs, G. 2002. "Malonyl-coenzyme A reductase from Chloroflexus aurantiacus, a key enzyme of the 3-hydroxypropionate cycle for autotrophic CO(2) fixation". J Bacteriol 184(9): 2404-10.</del>	
KRS	14	Ibarra, RU, Edwards, JS, Palsson, BO. 2002. "Escherichia coli K-12 undergoes adaptive evolution to achieve in silico predicted optimal growth". Nature 420(6912): 186-9.	
	15	Menendez, C, Bauer, Z, Huber, H, Gad'on, N, Stetter, KO, Fuchs, G. 1999. "Presence of acetyl coenzyme A (CoA) carboxylase and propionyl-CoA carboxylase in autotrophic Crenarchaeota and indication for operation of a 3-hydroxypropionate cycle in autotrophic carbon fixation". J Bacteriol 181(4): 1088-98.	
	16	Segre, D, Vitkup, D, Church, GM. 2002. "Analysis of optimality in natural and perturbed metabolic networks". Proc Natl Acad Sci U S A 99(23): 15112-7.	
	17	Stols, L, Donnelly, MI. 1997. "Production of succinic acid through overexpression of NAD(+)-dependent malic enzyme in an Escherichia coli mutant". Appl Environ Microbiol 63(7): 2695-701.	
	18	Zeikus, JG, Jain, MK, Elankovan, P. 1999. "Biotechnology of succinate acid production and markets for derived industrial products". Appl Microbiol Biotechnol 51: 545-552. Zeng, AP, Biebl, H. 2002. Bulk chemicals from biotechnology: the case of 1,3-propanediol production and the new trends. Adv Biochem Eng Biotechnol 74: 239-59.	
↓	19	Zhu, MM, Lawman, PD, Cameron, DC. 2002. "Improving 1,3-propanediol production from glycerol in a metabolically engineered Escherichia coli by reducing accumulation of sn-glycerol-3-phosphate". Biotechnol Prog >18(4): 694-9.	

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